Tawny-crowned Honeyeater, *Gliciphila melanops*.—Frequent and well-distributed in sand-plain areas. On the farm it has shown some tendency to persist in shelter belts and other remnants of native vegetation.

White-fronted Honeyeater. *Phylidonyris albifrons*.—Recorded on only one occasion, on May 20, 1970, in mallee just to the south of the farm.

Dusky Miner, *Manorhina flavigula*.—Not observed at "Sedgmoor", but birds have been observed between Narembeen and Gibb Rock and near the rabbit-proof fence between Gibb Rock and Holleton.

Red Wattle-bird, *Anthochaera carunculata*.—First noted in the "Sedgmoor" area on September 3 1970, but they have not proved to be frequent. At the Humps, in forest, they are much more conspicuous. At Holleton, too, they occur in forest.

Magpie-lark, *Grallina cyanoleuca*.—Birds may be seen at Mt. Walker and I have one record for farmland north of Gibb Rock. M.C.S. saw one bird on the farm shed in April 1972, but it did not remain. A similar visit took place in early September 1972. The species occurs in forest at the Humps.

Black-faced Wood-Swallow, *Artamus cinereus*.—Wood-Swallows occur between Narembeen and Gibb Rock. Birds were first noted on the farm in August 1967. In May 1968 birds were present in an area being cleared and were active during burning operations. There are other more recent records.

Grey Currawong, *Strepera versicolor*.—Noted on our first visit to the farm block in March 1966 and thereafter recorded fairly frequently, singly or in parties of up to six, both on the farm and throughout the district.

Grey Butcher-bird, *Cracticus torquatus*.—First noted on the farm on March 28, 1967, when birds were seen mobbing a (probable) Brown Hawk. More recent records from or adjacent to "Sedgmoor" are mainly for mallee areas.

Pied Butcher-bird, *C. nigrogularis*.—Birds have not yet appeared on the farm, but have been noted in Hyden, at the Humps and at Mt. Walker.

Western Magpie, *Gymnorhina dorsalis*.—In March 1967, six birds were present on the farm frequenting the newly cleared area but, in our absence, entering the shed either for shade or to forage. Eight birds were noted in May 1967. Since that time a flock has occupied a rather large territory comprising at least the cleared area, now 800 hectares. In May 1972, fourteen birds were present and these may comprise two flocks of eight and of six respectively. The birds were at first very wary, but now some at least seem more confiding. Calls differ from those of our coastal birds—a distinct dialect.

Raven. *Corvus coronoides*.—*Corvus* are widely distributed through the area. Birds found dead on the road—three—have all proved to be *C. coronoides*, though some calls heard at "Sedgmoor" have suggested *C. bennetti*, which occurs, no doubt, in this area.

NOTES ON THE HERBACEOUS VEGETATION OF THE EUCLA DISTRICT, W.A.

By B. M. J. HUSSEY, Mercedes College, Perth

INTRODUCTION

A considerable amount of botanical collecting has been done around Eucla, but mostly in the months of June-September. I visited the area in May 1973, when the ground was covered with a prolific growth of ephemerals due to heavy rains some six weeks earlier.

Willis (1959) lists the larger plants of the area and Johnson and Baird (1970) provide annotated descriptions of plants found at Forrest, some 70 miles further inland. However I can find no readily available published information on the herbaceous flora and these short notes are intended to fit into that gap.

Willis (1959) has described the various plant associations of the area in full, but a brief description is necessary here in order to set the scene.

Apart from the Hampton Scarp, an old cliff-line that reaches the coast

at Wilson Bluff just east of Eucla, the land is a limestone plateau. Not completely level, however, it is very gently undulating in a series of clay-pans or "dongas" and ridges. From the coast to some 4-5 miles inland the ridges are covered by mallee scrub. The dongas have a flora of grass and herbs.

Northwards the trees thin out very rapidly leaving a few stunted Myall *(Acacia sowdenii)* on the ridges. In this area, both ridges and dongas have a flora of saltbush types, mainly from the family Chenopodiaceae, that have been well described elsewhere. Woodella Rockhole is 6.5 miles along the Reid road from the Eucla Motel.

DONGAS IN THE MALLEE AREA

These seemed to be of two types, those with a lot of tussock grass (not identified) and those with little. Possibly, from the feel of the soil, the difference could be related to the amount of water that collects in them. Since the variation is subjective and not measured, the flora of both types will be described together.

The dominant plant was the Twinleaf, *Zygophyllum ovatum*, which was abundant and in full flower, presenting the appearance of a luxuriant rippling green meadow. Scattered among it were a number of other small plants, including *Trisetum pumilum, Anguillaria dioica, Kochia lobiflora, Stenopetalum lineare, Swainsona campestris, Erodium cicutarium, Oxalis corniculata, Euphorbia drummondii, Malva* sp., *Nicotiana goodspeedii, Brachycome ciliaris, Calotis hispidula*, and *Isoetopsis graminiflora.*

RIDGES IN THE MALLEE AREA

These supported relatively few herbs, but there were occasional patches of *Kochia lobiflora* and *Zygophyllum ovatum.*

WOODELLA ROCKHOLE

This is a sink-hole in the limestone found at the lowest part of a donga. It consists of a hole three feet across and four feet deep which contained water that was fresh but green. This lay in the centre of a roughly circular depression whose edges formed areas of shade and dampness where a variety of plants thrived.

Some of the plants were especially luxuriant examples of those already seen, eg. *Zygophyllum ovatum, Euphorbia drummondii, Brachycome ciliaris, Isoetopsis graminifolia.*

Fig. 1.—Woodella Rockhole.

However, a number of plants were found only at this and another rockhole. These were: *Eragrostis dielsii, Triglochin calcitrapa, Phlegmatospermum cochlearinum, Lepidium* sp., *Omphalolappula concava* (also at Wilson Bluff), *Crassula siekerana, Chenopodium album, C. melanocarpum,* and also a *Tetragonia* sp. that had large cabbage-sized leaves covered with shiny globules of transparent stuff making a very squishy "iee-plant".

AMONG SALTBUSH

The only annual was *Zygophyllum ovatum.*

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A MIGRATION OF *VANESSA KERSHAWI* (McCOY) (LEPIDOPTERA: NYMPHALIDAE) IN WESTERN AUSTRALIA

By C. N. SMITHERS, The Australian Museum, Sydney

The period 17 to 23 August, 1973 was spent on a field trip from Perth through Moora, Carnamah, Mingenew, Morawa, Wongan Hills, Northam, Narrogin and Collie and back to Perth. This round trip coincided with a migration of the Painted Lady Butterfly *(Vanessa kershawi* (McCoy) and provided an unusual opportunity to observe its progression. This speeies is known to be a migrant (Smithers and Peters, 1966; Smithers, 1969) in eastern Australia; there are no published records of movement in Western Australia but migrations of varying extent are probably annual events, Mr. Noel McFarland *(in litt.)* having observed one near Geraldton in August, 1972.

From 11 to 22 August very few butterflies were seen in the Perth area and none were *V. kershawi;* the weather was intermittently suitable for butterfly activity.

On travelling north the first *V. kershawi* were seen 10 km southeast of Coorow where a count gave 6/½ hr./45 metres, all flying in a south-south-west direetion. Similar counts, giving approximately comparable densities, were made at several points along the route given above betweeu Coorow and Morawa on 18 August and Morawa and Pithara on 19 August; a few specimens were seen south of Pithara. The weather was windy and overeast along some of the route of the 19 August.

V. kershawi was not seen in the Northam area on 20 August and only an oeeasional specimen seen from York to Williams on 21 and 22 August. By 23 August, however, the speeies was common at Wellington Dam and southerly population movements were observed between there and Perth.

These observations indieate that a moving population had reached just south of Coorow by 18 August and that I travelled through it until reaching the Pithara area south of which only a few specimens were encountered. The movement clearly eontinued until I re-entered it at Wellington Dam on 23 August, by which time *V. kershawi* had populated the whole coastal area by immigration.

At a point 5 km north of Carnamah. where a large stand of mature, flowering *Helichrysum* oeeurred together with Capeweed *(Arctotheca calendula)* some speeimens of *V. kershawi* were seen to be flitting around the plants whilst others were flying straight through the area in typieal migratory flight largely ignoring the flowers and not settling on the larval food plants.

Also, a distinet maturity gradient was observed in the host plants, those in the Carnamah area being mature and in flower whereas those